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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,303	02/28/2002	William L. Bowden	08935-257001	7607

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EXAMINER	
ALEJANDRO, RAYMOND	

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/085,303	BOWDEN ET AL.	
	Examiner	Art Unit	
	Raymond Alejandro	1745	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *8-17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *02/28/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-7 (Species 1) in the paper of 12/08/03 is acknowledged. The traversal is on the ground(s) that "for the claims to be restricted to different species, the claims must be mutually exclusive". This is not found persuasive because, *as admitted by the applicants*, some embodiments include an electrolyte formed of a mixture of solvents having DME and PC (*refer to specification, section 0021*), and certain embodiments includes an electrolyte formed of a mixture of solvents including EC (*refer to specification, section 0025*). Thus, the specification itself clearly identifies each of the disclosed species, the species being preferably identified as having different embodiments. Applicants' attention is kindly directed to ***MPEP 809.02(a)***, which establishes how species can be clearly identified. In this case, it is further noted that Species 1 will exhibit distinguishing characteristics with respect to Species 2 due to the addition of a distinct material. Thus, the disclosure encompasses several different and separated embodiments which are mutually exclusive. Accordingly, serious burden would be raised if the search of both species was made as required for the separate and distinct inventions.

The requirement is still deemed proper and is therefore made **FINAL**.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 02/28/02 was considered by the examiner.

Drawings

3. The drawings were received on 02/28/02. These drawings are acceptable.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Blasi et al US 2002/0113622.

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The present application is directed to a lithium electrochemical cell wherein the disclosed inventive concept comprises the constituents of the electrolyte mixture. Other limitations include the specific sodium content and the specific solvent-salts concentrations.

With reference to claims 1-5:

Blasi et al disclose an electrochemical secondary cell containing lithium salts and an anode containing lithium (ABSTRACT/SECTION 0010-0011). It is disclosed that the electrolyte can contain an organic solvent such as propylene carbonate (PC) and dimethoxyethane (DME)

including combinations thereof (SECTION 0029). The electrolyte also contains a lithium salt sich as LiTFS or LiTFSI or a combination thereof (SECTION 0029).

It is noted that in the absence of any electrochemical cell component/feature derived from and/or containing sodium (Na), the electrochemical cell must exhibit zero content of sodium (Na), that is to say, no sodium (Na) content at all. Thus, if both the anode material as well as suitable salts are selected from any material and/or salt except sodium (Na), the sodium (Na) content in the cell will be reduced to less than 600 ppm by weight. Thus, the sodium (Na) content is an inherent characteristic and/or property.

Therefore, the reference anticipates the claimed subject matter of the instant claims.

6. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Sloop US 2003/0186110.

As for claims 1-5:

Sloop makes known lithium batteries having suitable or typical electrolytes containing lithium salts dissolved in a carbonate solvent or solvent mixture (SECTION 0026). Examples of lithium salts include LiTFSI and LiTFS (lithium trifluoromethanesulfonate) dissolved in solvents such as DME (dimethoxyethane) and propylene carbonate (SECTION 0026).

It is noted that in the absence of any electrochemical cell component/feature derived from and/or containing sodium (Na), the electrochemical cell must exhibit zero content of sodium (Na), that is to say, no sodium (Na) content at all. Thus, if both the active materials as well as suitable salts are selected from any material and/or salt except sodium (Na), the sodium (Na)

content in the cell will be reduced to less than 600 ppm by weight. Thus, the sodium (Na) content is an inherent characteristic and/or property.

As to claims 6-7:

Sloop further teaches a lithium salt concentration of 1.2 M in a 1:1 solvent mixture. The 1:1 ratio is equivalent to 50 % by weight of each solvent (SECTION 0026).

Thus, the claims are anticipated.

7. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Flandrois et al 5554462.

Regarding claims 1-5:

Flandrois et al reveal a lithium rechargeable electrochemical cell (ABSTRACT). It is disclosed that the electrolyte is constituted by an organic solvent comprising a mixture of esters and/or ethers such as dimethoxyethane (DME) and esters selected from propylene carbonate (PC) among others (COL 4, lines 1-13). The solvents has dissolved therein a lithium salt selected from lithium trifluoromethanesulfonate and lithium trifluoromethanesulfonimide, among others (COL 4, lines 1-14).

It is noted that in the absence of any electrochemical cell component/feature derived from and/or containing sodium (Na), the electrochemical cell must exhibit zero content of sodium (Na), that is to say, no sodium (Na) content at all. Thus, if both the active materials as well as suitable salts are selected from any material and/or salt except sodium (Na), the sodium (Na) content in the cell will be reduced to less than 600 ppm by weight. Thus, the sodium (Na) content is an inherent characteristic and/or property.

On the subject of claim 6:

Flandrois et al further discuss an example of wherein each cell includes an electrolyte composed of an organic solvent with was a mixture of 20 % by volume of PC and also containing DME in which the lithium salt was dissolved at a concentration of 1 mole/liter (1.0 M). *Since Flandrois et al directly disclose the use of propylene carbonate (PC) within the claimed concentration/content, as well as the teaching of constituting the electrolyte by employing a mixture of esters and/or ethers such as dimethoxyethane (DME), it is thus understood that Flandrois et al implicitly shows the claimed weight percent.*

For this reason, the claims are considered to be anticipated by the preceding prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:30 am - 7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Raymond Alejandro
Examiner
Art Unit 1745